## AMENDMENTS TO THE CLAIMS

1.(Currently Amended) In a method of treating exhaust gases from a diesel engine which emits an exhaust gas containing particles of soot and hydrocarbons, ~~the improvement~~ which comprises contacting the exhaust gas with a catalyst ~~consisting essentially of~~ comprising a zeolite having acid properties, and of the general formula

$$M^1_{x/n}[(M^2O_2)_x(SiO_2)_y]\cdot qH_2O \qquad (I)$$

in which

$M^1$ represents one equivalent of an exchangeable cation,

$M^2$ represents a trivalent element which, together with the Si, forms the oxidic framework of the zeolite,

n represents the valence of the cation $M^1$,

y/x represents the $SiO_2$ to $M^2O_2$ ratio and ranges from 1.0 to 100, ~~preferably from 1.0 to 50~~ and

q represents the number of water molecules~~.~~,

wherein at least one of $M^1$ and $M^2$ comprise rare earth cations ~~50-100% of said exchangeable cations $M^1$ have been replaced by hydrogen ions, whereby the hydrocarbons are cracked, with partial oxidation,~~ and at least one of the size or the quantity of the soot particles is reduced~~, and $SO_2$, if contained in said exhaust gas, is not oxidized~~.

2. (Original) The method according to claim 1, wherein the zeolite has cracking properties for long-chain and aromatic hydrocarbons.

3. (Original) The method according to claim 1, wherein the zeolite is a faujasite.

4. (Original) The method according to claim 1, wherein the zeolite is a dealuminized faujasite.

5. (Original) The method according to claim 1, wherein the zeolite is a pentasil.

6. (Original) The method according to claim 5, wherein the zeolite has $SiO_2$ and $Al_2O_3$ at an $SiO_2$ to $Al_2O_3$ ratio of 25 to 2000.

7. (Original) The method according to claim 1, wherein the zeolite is a mordenite.

8. (Original) The method according to claim 1, wherein the zeolite is a dealuminized mordenite.

9. (Currently Amended) The method according to claim 1, wherein the zeolite further comprises ~~contains~~ at least one element selected from the group consisting of ~~elements of the 2nd main group of the periodic system of elements~~ Li, Na, K, Rb, Cs, Mg, Ca, Sr, Ba, and transition metals~~and the rare earth elements~~.

10. (Original) The method according to claim 1, wherein the zeolite contains at least one transition element.

11. (Original) The method according to claim 1, wherein the zeolite contains at least one element selected from the group consisting of Cu, Ni, Co, Fe, Cr, Mn and V.

12. (Original) The method according to claim 1, wherein the zeolite contains Cu.

13. (Currently Amended) In combination, a diesel engine, a pipe for exhaust gas produced when operating the diesel engine, and a catalyst consisting essentially of a zeolite having acidic properties and selected from the group consisting of: the type having exchangeable metal cations, wherein 50 to 100 percent of the exchangeable metal cations have been replaced by hydrogen ions; rare-earth exchanged zeolites; and Cu exchanged zeolites, and positioned so that the exhaust gas contacts it in exhausting to the atmosphere.

14. (New) The method of claim 1, wherein said hydrocarbons are $C_{14}$-$C_{50}$ hydrocarbons.

15. (New) The method of claim 1, wherein $SO_2$, if contained in said exhaust gas, is not oxidized.

16. (New) The method according to claim 1, wherein the zeolite is exchanged with a rare-earth selected from the group consisting of lanthanum exchanged zeolite, cerium exchanged zeolite, and mixtures of lanthanum and cerium exchanged zeolites.

17. (New) In a method of treating exhaust gases from a diesel engine which emits an exhaust gas containing particles of soot, the improvement which comprises contacting the exhaust gas with a zeolite of the having acidic properties and selected from the group consisting of: the type having exchangeable metal cations, wherein 50 to 100 percent of the exchangeable metal cations have been replaced by hydrogen ions; rare-earth exchanged zeolites; and Cu exchanged zeolites, and the zeolite is in the absence of platinum group metal, whereby at least one of the size and quantity of the soot particles is reduced.

18. (New) The method according to claim 17, wherein the zeolite has exchangeable metal cations, wherein 50 to 100 percent of the exchangeable metal cations have been replaced by hydrogen ions.

19. (New) The method according to claim 17, wherein the zeolite is a rare-earth exchanged zeolite.